

**REMARKS**

Claims 1-10, 13-20 and 22-23 are pending in this application. By this Amendment, claims 1-10, 13-20 and 22-23 are amended. The claims are amended to change the term "retrieve" or its variants to corresponding variants of "search". These amendments are made to more accurately reflect the meaning of the original terms used in the Japanese priority document. Specifically, the term translated as "retrieve" or its variants is more accurately translated as "search" or its variants. No new matter is added.

**I. The Claims Are Definite**

The Office Action rejects claims 1-10, 13-20 and 22-23 under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. Specifically, the Office Action alleges that the phrases "data image to be retrieved", "digital information", "data page", "bit map image", "data image address", "block information", "retrieval data block", "address", "target data image", "encoded data image", and "to-be-retrieved digital information" do not appear to have logical or structural relationships between them. The Office Action further states that "there is only one data information that [sic] being recorded and being retrieved". The rejection is respectfully traversed.

As disclosed, a holographic recording medium stores at least one hologram having a plurality of data pages that are separately retrievable. The stored data pages can have multiple data blocks in which digital information can be stored. A search data page also having multiple data blocks can be used to find a matching data page from the holographic recording medium. The match can be determined by matching search data in less than all the data blocks of the search data page to data in the stored holograms. In view of the nature of the disclosed subject matter, various features of the claims will necessarily overlap with each other, such as the terms hologram, data page, and data block; and search data page, and search image.

The claims have been amended to more clearly, consistently, and logically recite the claimed features. Applicants request withdrawal of the rejection.

## **II. The Claims Are Patentable Over The Applied References**

The Office Action rejects claims 1-10, 13-20 and 22-23 under 35 U.S.C. §103(a) over U.S. Patent No. 5,319,629 to Henshaw et al. (Henshaw) in view of "Content-addressable data storage by use of volume holograms", Burr et al., Applied Optics, vol. 38, No. 32, November 1999, pages 6779-6784 (Burr). Applicants respectfully traverse the rejection.

Regarding independent claims 1, 9, 15 and 23 the applied references fail to result in:

(1) "modulating the signal beam, by a spatial light modulator, using a search data page having a plurality of equally divided data blocks" (emphasis added), as recited in claim 1 and similarly recited in claim 9, and "a spatial light modulator provided in the object optical system that displays a search data page including a plurality of data blocks, the data blocks of the search data page being equally sized with each other" as recited in claim 15 and similarly recited in claim 23;

(2) "at least one of the data blocks of the search data page consisting of an encoded search image", as recited in claim 1 and similarly recited in claims 15 and 23;

(3) "a same search image being encoded into each data block of the search data page" as recited in claim 9;

(4) "a data image is formed within each data block of the recorded data pages by an encoding method that provides a certain number of ON pixels", as recited in claim 1; and

(5) "wherein each data block recorded in the holographic recording medium contains a data image formed by an encoding method that provides a different number of ON pixels for each data block", as recited in claim 9 and similarly recited in claim 23.

The Office Action cites to Henshaw and: (1) alleges that data specifying plane 126 corresponds to the claimed spatial light modulator; and (2) alleges that col. 6, lines 36-39

discloses a two-dimensional array of ON and OFF pixels. The Office Action acknowledges that Henshaw fails to disclose that a diffracted beam with a maximum intensity is detected as the target diffracted beam, but cites to Burr as allegedly curing this deficiency.

The Office Action cites to Burr and alleges that, at page 6780, col. 1, paragraph 2, Burr discloses that a diffracted beam having a correlation peak is chosen as the target diffracted beam, and alleges that the correlation peak is the maximum intensity.

Henshaw fails to disclose feature (1) quoted above of a plurality of equally divided/sized data blocks; feature (2) quoted above of a search image being encoded in at least one data block; and feature (3) quoted above of a same search image being encoded in each data block because Henshaw only discloses a single undivided data page (Fig. 2), and thus cannot disclose encoding a search image into one or more (let alone each) of the plurality of data blocks.

Henshaw fails to disclose features (4)-(5) quoted above of the data image for each data block being encoded by an encoding method that provides a certain number of ON pixels (feature (4)) or a different number of ON pixels for each data block (feature (5)) because Henshaw is silent as to any requirement for the number of ON pixels of the image in data specifying plane 126. Further, even if Henshaw disclosed a requirement regarding the number of ON pixels in the data specifying plane 126, feature (5) would not be disclosed because Henshaw does not disclose a plurality of data blocks.

Burr, cited as disclosing a method of detecting a matching diffracted beam, fails to cure the deficiencies of Henshaw.

For the foregoing reasons, Applicants request withdrawal of the rejection.

**III. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



James A. Oliff  
Registration No. 27,075

Jonathan H. Backenstose  
Registration No. 47,399

JAO:JHB/mab

**Attachments:**

Petition for Extension of Time  
Request for Continued Examination

Date: April 28, 2009

**OLIFF & BERRIDGE, PLC**  
**P.O. Box 320850**  
**Alexandria, Virginia 22320-4850**  
**Telephone: (703) 836-6400**

<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>
--